

OIPE

RAW SEQUENCE LISTING

DATE: 07/26/2001

PATENT APPLICATION: US/09/779,334A

TIME: 17:42:48

Input Set : A:\NOVT 100.ST25.txt

Output Set: N:\CRF3\07262001\I779334A.raw

ENTERED

3 <110> APPLICANT: Sjoeholm, Carsten
 4 Oostergaard, Peter Rahbek
 5 Klunter, Anne-Marie
 7 <120> TITLE OF INVENTION: Use of Acid-Stable Subtilisin Proteases in Animal Feed
 9 <130> FILE REFERENCE: NOVT 100
 11 <140> CURRENT APPLICATION NUMBER: 09/779,334A
 12 <141> CURRENT FILING DATE: 2001-02-08
 14 <160> NUMBER OF SEQ ID NOS: 7
 16 <170> SOFTWARE: PatentIn version 3.1
 18 <210> SEQ ID NO: 1
 19 <211> LENGTH: 27
 20 <212> TYPE: PRT
 21 <213> ORGANISM: Acremonium chrysogenum ATCC 48272
 23 <400> SEQUENCE: 1
 25 Ala Leu Val Thr Gln Asn Gly Ala Pro Trp Gly Leu Gly Thr Ile Ser
 26 1 5 10 15
 29 His Arg Gln Pro Gly Ser Thr Ser Tyr Ile Tyr
 30 20 25
 33 <210> SEQ ID NO: 2
 34 <211> LENGTH: 17
 35 <212> TYPE: PRT
 36 <213> ORGANISM: Bacillus alcalophilus NCIMB 10438
 38 <400> SEQUENCE: 2
 40 Asn Gln Val Thr Pro Trp Gly Ile Thr Arg Val Gln Ala Pro Thr Ala
 41 1 5 10 15
 44 Trp
 48 <210> SEQ ID NO: 3
 49 <211> LENGTH: 17
 50 <212> TYPE: PRT
 51 <213> ORGANISM: Paecilomyces lilacinus CBS 102449
 53 <400> SEQUENCE: 3
 55 Ala Tyr Thr Gln Gln Pro Gly Ala Pro Trp Gly Leu Gly Ser Ile Ser
 56 1 5 10 15
 59 His
 63 <210> SEQ ID NO: 4
 64 <211> LENGTH: 22
 65 <212> TYPE: PRT
 66 <213> ORGANISM: Fusarium oxysporum IFO 4471
 68 <400> SEQUENCE: 4
 70 Ala Leu Thr Thr Gln Ser Gly Ala Thr Trp Gly Leu Gly Thr Val Ser

RAW SEQUENCE LISTING

DATE: 07/26/2001

PATENT APPLICATION: US/09/779,334A

TIME: 17:42:48

Input Set : A:\NOVT 100.ST25.txt

Output Set: N:\CRF3\07262001\I779334A.raw

83 <220> FEATURE:

84 <221> NAME/KEY: SIGNAL

85 <222> LOCATION: (1)..(27)

86 <223> OTHER INFORMATION:

89 <220> FEATURE

90 <221> NAME/KEY: PEPTIDE

91 <222> LOCATION: (118)..(397)

92 <223> OTHER INFORMATION:

95 <220> FEATURE:

96 <221> NAME/KEY: mat_peptide

97 <222> LOCATION: (28)..()

98 <223> OTHER INFORMATION:

101 <400> SEQUENCE: 5

103 Met Lys Phe Lys Lys Ile Ala Ala Leu Ser Leu Ala Thr Ser Leu Ala

104 -25 -20 -15

107 Leu Phe Pro Ala Phe Gly Gly Ser Ser Leu Ala Lys Glu Ala Pro Lys

108 -10 -5 -1 1 5

111 Pro Phe Gln Pro Ile Asn Lys Thr Leu Asp Lys Gly Ala Phe Glu Ser

112 10 15 20

115 Gly Glu Val Ile Val Lys Phe Lys Asp Gly Val Ser Lys Lys Ala Gln

116 25 30 35

119 Gly Ser Ala Leu Asn Lys Ala Glu Ala Asn Glu Gln Lys Ala Ser Ala

120 40 45 50

123 Lys Asp Pro Phe Gln Val Leu Glu Val Ala Asp Val Asp Gln Ala Val

124 55 60 65

127 Lys Ala Leu Glu Asn Asn Pro Asn Val Glu Tyr Ala Glu Pro Asn Tyr

128 70 75 80 85

131 Thr Phe Gln Ala Thr Trp Ser Pro Asn Asp Pro Tyr Tyr Ser Ala Tyr

132 90 95 100

135 Gln Tyr Gly Pro Gln Asn Thr Ser Thr Pro Ala Ala Trp Asp Val Thr

136 105 110 115

139 Arg Gly Ser Ser Thr Gln Thr Val Ala Val Leu Asp Ser Gly Val Asp

140 120 125 130

143 Tyr Asn His Pro Asp Leu Ala Arg Lys Val Ile Lys Gly Tyr Asp Phe

144 135 140 145

147 Ile Asp Arg Asp Asn Asn Pro Met Asp Leu Asn Gly His Gly Thr His

148 150 155 160 165

151 Val Ala Gly Thr Val Ala Ala Asp Thr Asn Asn Gly Ile Gly Val Ala

152 170 175 180

155 Gly Met Ala Pro Asp Thr Lys Ile Leu Ala Val Arg Val Leu Asp Ala

156 185 190 195

159 Asn Gly Ser Gly Ser Leu Asp Ser Ile Ala Ser Gly Ile Arg Tyr Ala

160 200 205 210

163 Ala Asp Gln Gly Ala Lys Val Leu Asn Leu Ser Leu Gly Cys Glu Cys

164 215 220 225

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/779,334A

DATE: 07/26/2001

TIME: 17:42:48

Input Set : A:\NOVT 100.ST25.txt

Output Set: N:\CRF3\07262001\I779334A.raw

```

175 Gln Pro Ala Ser Tyr Pro Asn Ala Ile Ala Val Gly Ala Ile Asp Ser
176          265          270          275
179 Asn Asp Arg Lys Ala Ser Phe Ser Asn Tyr Gly Thr Trp Val Asp Val
180          280          285          290
183 Thr Ala Pro Gly Val Asn Ile Ala Ser Thr Val Pro Asn Asn Gly Tyr
184          295          300          305
187 Ser Tyr Met Ser Gly Thr Ser Met Ala Ser Pro His Val Ala Gly Leu
188 310          315          320          325
191 Ala Ala Leu Leu Ala Ser Gln Gly Lys Asn Asn Val Gln Ile Arg Gln
192          330          335          340
195 Ala Ile Glu Gln Thr Ala Asp Lys Ile Ser Gly Thr Gly Thr Asn Phe
196          345          350          355
199 Lys Tyr Gly Lys Ile Asn Ser Asn Lys Ala Val Arg Tyr
200          360          365          370

```

203 <210> SEQ ID NO: 6

204 <211> LENGTH: 367

205 <212> TYPE: PRT

206 <213> ORGANISM: Paecilomyces lilacinus CBS 143.75

208 <220> FEATURE:

209 <221> NAME/KEY: PEPTIDE

210 <222> LOCATION: (70)..(367)

211 <223> OTHER INFORMATION:

214 <220> FEATURE:

215 <221> NAME/KEY: PEPTIDE

216 <222> LOCATION: (84)..(367)

217 <223> OTHER INFORMATION:

220 <400> SEQUENCE: 6

```

222 Ala Arg Ala Pro Leu Leu Thr Pro Arg Gly Ala Ser Ser Ser Ser Thr
223 1          5          10          15
226 Ala Ser Thr Leu Ser Ser Ser Arg Thr Ala Cys Pro Ser Pro Leu Ser
227          20          25          30
230 Thr Arg Leu Ser Ala Leu Cys Pro Arg Arg Pro Thr Ala Ser Thr Thr
231          35          40          45
234 Thr Phe Ser Glu Ala Ser Arg Asn Leu Asn Ala Asn Asp Leu Lys Thr
235          50          55          60
238 Leu Arg Asp His Pro Asp Val Glu Tyr Ile Glu Gln Asp Ala Ile Ile
239 65          70          75          80
242 Thr Ile Asn Ala Tyr Thr Gln Gln Pro Gly Ala Pro Trp Gly Leu Gly
243          85          90          95
246 Arg Ile Ser His Arg Ser Lys Gly Ser Thr Thr Tyr Glu Tyr Asp Thr
247          100         105         110
250 Ser Gly Gly Ser Gly Thr Cys Ala Tyr Val Ile Asp Thr Gly Val Glu
251          115         120         125
254 Ala Ser His Pro Glu Phe Glu Gly Arg Ala Ser Gln Ile Lys Ser Phe
255          130         135         140

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/779,334A

DATE: 07/26/2001

TIME: 17:42:48

Input Set : A:\NOVT 100.ST25.txt

Output Set: N:\CRF3\07262001\I779334A.raw

```

266 Tyr Gly Val Lys Val Leu Asp Asn Ser Gly Ser Gly Ser Tyr Ser Gly
267          180          185          190
270 Ile Ile Ser Gly Met Asp Phe Ala Val Gln Asp Ser Lys Ser Arg Ser
271          195          200          205
274 Cys Pro Lys Gly Val Val Ala Asn Met Ser Leu Gly Gly Gly Lys Ala
275          210          215          220
278 Gln Ser Val Asn Asp Gly Ala Ala Ala Met Ile Arg Ala Gly Val Phe
279 225          230          235          240
282 Leu Ala Val Ala Ala Gly Asn Asp Asn Ala Asn Ala Ala Asn Tyr Ser
283          245          250          255
286 Pro Ala Ser Glu Pro Thr Val Cys Thr Val Gly Ala Thr Thr Ser Ser
287          260          265          270
290 Asp Ala Arg Ser Ser Phe Ser Asn Tyr Gly Asn Leu Val Asp Ile Phe
291          275          280          285
294 Ala Pro Gly Ser Asn Ile Leu Ser Thr Trp Ile Gly Gly Thr Thr Asn
295          290          295          300
298 Thr Ile Ser Gly Thr Ser Met Ala Thr Pro His Ile Val Gly Leu Gly
299 305          310          315          320
302 Ala Tyr Leu Ala Gly Leu Glu Gly Phe Pro Gly Ala Gln Ala Leu Cys
303          325          330          335
306 Lys Arg Ile Gln Thr Leu Ser Thr Lys Asn Val Leu Thr Gly Ile Pro
307          340          345          350
310 Ser Gly Thr Val Asn Tyr Leu Ala Phe Asn Gly Asn Pro Ser Gly
311          355          360          365
314 <210> SEQ ID NO: 7
315 <211> LENGTH: 269
316 <212> TYPE: PRT
317 <213> ORGANISM: Bacillus sp. THS-1001
319 <400> SEQUENCE: 7
321 Asn Gln Val Thr Pro Trp Gly Ile Thr Arg Val Gln Ala Pro Thr Ala
322 1          5          10          15
325 Trp Thr Arg Gly Tyr Thr Gly Thr Gly Val Arg Val Ala Val Leu Asp
326          20          25          30
329 Thr Gly Ile Ser Thr His Pro Asp Leu Asn Ile Arg Gly Gly Val Ser
330          35          40          45
333 Phe Val Pro Gly Glu Pro Ser Tyr Gln Asp Gly Asn Gly His Gly Thr
334          50          55          60
337 His Val Ala Gly Thr Ile Ala Ala Leu Asn Asn Ser Ile Gly Val Val
338 65          70          75          80
341 Gly Val Ala Pro Asn Ala Glu Leu Tyr Ala Val Lys Val Leu Gly Ala
342          85          90          95
345 Asn Gly Ser Gly Ser Val Ser Ser Ile Ala Gln Gly Leu Gln Trp Thr
346          100          105          110
349 Ala Gln Asn Asn Ile His Val Ala Asn Leu Ser Leu Gly Ser Pro Val
          115          120          125

```

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/779,334A

DATE: 07/26/2001

TIME: 17:42:48

Input Set : A:\NOVT 100.ST25.txt

Output Set: N:\CRF3\07262001\I779334A.raw

```

361 Tyr Pro Ala Arg Tyr Ala Asn Ala Leu Ala Val Gly Ala Thr Asp Gln
362                               165                               170                               175
365 Asn Asn Asn Arg Ala Ser Phe Ser Gln Tyr Gly Thr Gly Leu Asn Ile
366                               180                               185                               190
369 Val Ala Pro Gly Val Gly Ile Gln Ser Thr Tyr Pro Gly Asn Arg Tyr
370                               195                               200                               205
373 Ala Ser Leu Ser Gly Thr Ser Met Ala Thr Pro His Val Ala Gly Val
374                               210                               215                               220
377 Ala Ala Leu Val Lys Gln Lys Asn Pro Ser Trp Ser Asn Thr Gln Ile
378 225                               230                               235                               240
381 Arg Gln His Leu Thr Ser Thr Ala Thr Ser Leu Gly Asn Ser Asn Gln
382                               245                               250                               255
385 Phe Gly Ser Gly Leu Val Asn Ala Glu Ala Ala Thr Arg
386                               260                               265

```

VERIFICATION SUMMARY

DATE: 07/26/2001

PATENT APPLICATION: US/09/779,334A

TIME: 17:42:49

Input Set A:\NOVT 100.ST25.txt

Output Set N:\CRF3\07262001\I779334A.raw